IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of **Hosein** *et al.* Serial No.: **10/721,403** Filed: **November 25, 2003** For: **Queuing Delay Based Rate Control** Attorney's Docket No: **4740-242**	)))))))))))))))

PATENT PENDING

Examiner: Juvena W. Loo

Group Art Unit: 2683

Confirmation No.: 8049

Director of Technology Center Group 2680
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Petition to Review Restriction Requirement Under 37 C.F.R. § 1.144

Pursuant to the provisions of 37 C.F.R. § 1.144, Applicants petition the Director to review

the restriction requirement issued by the examiner on 1 June 2007, and finalized by the

examiner in the first Office Action on the merits, mailed on 7 August 2007. The petition fee of

$130 is submitted herewith, and the Office is authorized to charge any additional fees that may

be required to Deposit Account 18-1167.

The examiner split the originally filed claims 1-44 into five claim groups corresponding to

different class/subclass associations. In the 7 August Office Action, the examiner justifies the

restriction and makes it final based on arguing that separately searching these multiple

class/subclasses would impose a burden on the examiner. Of course, that language does not accurately reflect the basis for determining whether a restriction is proper. According to Section 803 of the MPEP, the examiner must search and examine all claims unless doing so would impose a *serious* burden on the examiner. The examiner has not alleged a serious burden, although the identification of five claim groups might speak for itself, assuming that such claim groupings were appropriately made.

In this instance, the claim groupings are not appropriate because they are justified on class/subclass associations that are not sensible in light of the claims at issue. That is, the examiner ignores obvious subject matter overlap between the claims and even explicit identical or nearly identical substantive language in the claims, and adopts what appear to be arbitrary bases for grouping subsets of Applicant's claims into different class/subclass definitions.

For example, Group I claims include independent claim 1 and independent claim 24, both directed to reverse link rate control for a mobile station. These claims establish that rate control requests depend on targeted queuing delays, reverse link throughput, and transmit data queue sizes. Claim 4 (from claim 1) and claim 27 (from claim 24) explain that these values may be used to generate reverse link rate requests (increase or decrease requests) by determining whether an expected queuing delay exceeds the targeted queuing delay. In this context, the transmit data queue size and the reverse link throughput provide a basis for determining the expected queuing delay.

The Restriction Requirement places the Group I claims in class 370, subclass 328. Class 370 holds "multiplex communications" art, and subclass 328 is defined for art "having a plurality of contiguous regions served by respective fixed stations," and is indented under subclass 310 for "communication over free space." That classification seems wrong to Applicant, but, if that classification applies to Group I claims, then it certainly applies to Group II claims as well. Both Group I and Group II claims are explicitly directed to reverse link rate control for a mobile station, and both claim groups include claims with explicit limitations to

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making reverse link rate requests based on expected queuing delays in comparison to targeted queuing delays. Compare, for example, the combined limitations of claims 1 and 4 in Group I with the limitations of claim 13 in Group II.

It is therefore logically inconsistent for the examiner to place Group II claims in class 370, subclass 235, which covers flow control of data transmission through a network and is indented under subclass 229 for subject matter having means to regulate the amount of information transmitted through the network once the data is in the network. That classification makes no sense on the substantive language of the Group II claims. Better stated, it is obviously artificial to place Group I claims in 370/328, while placing Group II claims in 370/235. Further, both Group I and Group II claims relate to reverse link rate control based at least in part on targeted transmit queuing delays, and it therefore makes no sense to place Group II claims in 370/235, when that classification explicitly relates to flow control for data that has already entered a network.

Even the examiner's description of Group II claims acknowledges that claims in Group II are, like those in Group I, directed to determining reverse link rate requests on targeted queuing delays. Thus, the class/subclass separation of Group I claims and Group II claims is not justifiable on the substantive language of the claims at issue.

As for the Group III claims (claims 20-23), they are explicitly directed to a method of reverse link rate control at a mobile station, and include explicit limitations to receiving targeted queuing delay information for service instance(s) being supported by the mobile station and periodically calculating and requesting overall data rates needed to achieve the targeted queuing delays. Those limitations expressly fall into the same general subject matter of the Group I and II claims.

For example, claim 1 in Group I is directed to a method of reverse link rate control at a mobile station. While claim 1 does not disclose "service instances" like claim 20, it does include limitations to receiving targeted queuing delays, monitoring reverse link throughput and transmit

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data queue sizes, and requesting reverse link rates based on the targeted queuing delays, throughput, and average queue sizes.

Against these similarities between the Group I/II and Group III claims, with their explicit, common use of transmit queuing delays as a basis for generating reverse link rate requests from a mobile station, the examiner places Group III claims under class 370, subclass 252. That subclass is indented under subclass 241 and it is defined for subject matter where a particular communication parameter is measured (e.g., traffic noise ratio, freeze out ratio, etc.).

That class/subclass placement makes sense for Group III, unless it somehow also applies with equal force to Groups I and II. It appears wholly arbitrary, then, for the examiner to cleanly break out Group III claims and drop them in a class/subclass definition that stands apart from all other claims.

As for the Group IV claims (claims 36-41), they relate to the forward link rather than the reverse link. Still, the Group IV claims include substantive language quite similar to, for example, claim 1 of Group I. That is, claim 36 includes explicit limitations to determining targeted queuing delays, determining expected queuing delays and forward link throughput (instead of reverse link throughput), and adjusting a scheduling priority based on the targeted/expected queuing delays and throughput.

The examiner places the Group IV claims in class/subclass 370/328, which is the same classification used by the examiner for Group I claims. The examiner cannot credibly suggest an undue examination burden for examining the Group I and Group IV claims together when they self-evidently have overlapping subject matter and the examiner has placed them into the identical class/subclass. That is, the examiner will necessarily have to focus on the determination/use of targeted queuing delays, as with the Group I (and II and III) claims, and the proper search for Group IV claims therefore will be substantially or wholly overlapping with the search done for claim Groups I, II, and III.

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As further evidence that the examiner's classifications are arbitrary and not based on the substantive claim language at issue, the Group V claims, like the Group IV claims, relate explicitly to a base station, including processing circuits for granting or denying reverse link rate requests from a mobile station. However, rather than use class 370/328 relating to plural non-mobile stations (i.e., base stations), the examiner places the Group V claims in class/subclass 370/229, which covers subject matter including provisions for (a) avoiding or (b) regulating an actual or potential traffic overload condition.

Without commenting on the merits of that classification, it is clear that if that classification legitimately applies to the Group V claims, it applies with equal legitimacy to the other claim groups.

With the above arguments in mind, Applicant strongly believes that the examiner's grouping of claims was not based on a considered reading of the actual claim language at issue. Respectfully, the claim groupings and associated classifications appear arbitrary when compared against the actual substantive claim language. Applicant respectfully requests the Director to withdraw the restriction as improper.

Respectfully submitted,

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